

CLAIMS

1. A device for controlling an internal combustion engine with a variable valve system characterized in that, while the piston descends just after the combustion
5 in the cylinder, the intake valve is opened by the variable valve system for intake valve such that the intake air is supplied into the cylinder from the engine intake system.
2. A device for controlling an internal combustion
10 engine according to claim 1 wherein, said intake valve is opened when the secondary air is required in the engine exhaust system.
3. A device for controlling an internal combustion engine according to claim 1 or 2 wherein, when the
15 pressure in the cylinder becomes lower than the atmospheric pressure, said intake valve is opened by said variable valve system for intake valve such that the intake air is supplied into the cylinder from the engine intake system.
- 20 4. A device for controlling an internal combustion engine according to claim 1 or 2 wherein, the pressure in the cylinder is lowered by opening the exhaust valve by the variable valve system for exhaust valve before said intake valve is opened just after the combustion.
- 25 5. A device for controlling an internal combustion engine according to claim 4 wherein, said exhaust valve opened by said variable valve system for exhaust valve just after the combustion causes to exhaust the exhaust gas from the cylinder, and said intake valve opened by
30 said variable valve system for intake valve just after the combustion causes to supply the intake air into the cylinder, such that the engine operation can be changed from a 4-stroke operation to a 2-stroke operation.
- 35 6. A device for controlling an internal combustion engine according to any one of claims 1 - 5 wherein, said variable valve system is an electromagnetic actuator.